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Abstract

The present invention relates to a transmitting device and a receiving device in a wireless orthogonal frequency division multiplex (OFDM) communication system with space time transmit diversity (STTD). Further, the present invention relates to a channel estimation method for performing a channel estimation in such a wireless communication system, in which the transmitting device comprises a first and a second antenna for transmitting signals with space time transmit diversity. The first and the second antenna means are arranged spaced apart from each other in a space diversity arrangement, whereby first and second pilot symbols are transmitted via said first and said second antenna means, respectively. Some of the second pilot symbols are orthogonal to corresponding ones of the first pilot symbols, so that a channel estimation to separately determine the transmission quality of signals transmitted from the first and the second antenna means, respectively, can be performed in a receiving device which receives the signals with only one single antenna.

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(Fig. 1)

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